

Opinion of the Group of Experts established under Article 31 of the Euratom Treaty

on the

Draft Safety Requirements: Radiation Protection and Safety of Radiation Sources: International Basic Safety Standards

Revision of IAEA Safety Series No. 115

23 November 2011

A. Introduction

On 12 September 2011 the Board of Governors of the IAEA approved revised basic safety standards. The Board of Governors first approved basic safety standards in June 1962, which were published by the IAEA as Safety Series No. 9. A revised version was published in 1967. A third revision was published by the IAEA as the 1982 Edition of Safety Series No. 9; this Edition was jointly sponsored by the IAEA, the International Labour Organization (ILO), the Nuclear Energy Agency of the Organisation for Economic Co-operation and Development (OECD/NEA) and the World Health Organization (WHO). The next version was the International Basic Safety Standards for Protection against Ionizing Radiation and for the Safety of Radiation Sources published by the IAEA as Safety Series No. 115 in February 1996, and jointly sponsored by the Food and Agriculture Organization of the United Nations (FAO), the IAEA, the ILO, the OECD/NEA, the Pan American Health Organization (PAHO) and the WHO.

In September 2005, the General Conference of the Agency, by resolution GC(49)/RES/9, requested the Agency Secretariat to undertake a review of the International Basic Safety Standards for Protection against Ionizing Radiation and for the Safety of Radiation Sources (IAEA, Vienna (1996)) (the IBSS). The Agency invited representatives of UN and other intergovernmental organizations to participate in the review and revision of the IBSS through the establishment of a BSS Secretariat made up of designated representatives of the potential sponsoring organizations: the European Atomic Energy Community (EAEC), the FAO, the ILO, the OECD/NEA, the PAHO, the United Nations Environment Programme (UNEP) and the WHO. The BSS Secretariat was supported by the Agency Secretariat.

In September 2006, the IAEA General Conference, by way of resolution GC(50)/RES/10 (2006), noted the review of the IBSS carried out in response to paragraph 10 of resolution GC(49)/RES/9, and noted that the revision was to be coordinated by the BSS Secretariat. The revision of the IBSS commenced in early 2007 with a series of drafting meetings on the basis of thematic areas, hosted by the IAEA, ILO, WHO, NEA and PAHO. The draft text developed at these meetings provided the basis for discussions at a Technical Meeting held in July 2007, with the participation of representatives of the potential sponsoring organizations.

The text takes account of the findings of the United Nations Scientific Committee on the Effects of Atomic Radiation and the recommendations of the International Commission on Radiological Protection (ICRP). The revised standards reflect the recommendations made in ICRP Publication 103 (2007).

The revised IBSS are structured on the basis of 'planned exposure situations', 'emergency exposure situations' and 'existing exposure situations', with each main section of the text having the same layout covering occupational exposure, public exposure and (for planned exposure situations only) medical exposure, following the ICRP recommendations. There is also a main section dealing with generic requirements that are applicable in all exposure situations. The revised IBSS cover protection of the environment, to be consistent with the Fundamental Safety Principles.

On 21 April 2011, the ICRP issued a Statement on Tissue Reactions which recommended a reduction in the dose limit (in terms of equivalent dose) for the lens of the eye. The Commission on Safety Standards concluded in May 2011 that it intends to incorporate the revised dose limit to the lens of the eye into Schedule III of the revised IBSS, after consultation of Member States. Member States were invited to provide comment on the revised Schedule III by 7 July 2011. Following a recommendation from the outgoing and incoming Chairmen of the Radiation Safety Standards Committee, the Chairman of the Commission on Safety Standards approved the revised Schedule III on 12 July 2011.

Lists of radionuclide-specific dose coefficients relating to incorporation of radionuclides by inhalation or ingestion for workers and for different age-classes of members of the public had been included in IAEA Safety Series N° 115. These values still need to be recalculated by ICRP particularly in the light of new radiation and tissue weighting factors defined in ICRP Publication 103. The new values will be included as soon as these become available.

The revised BSS, replacing IAEA Safety Series N° 115, have been published as a Safety Requirements publication in the IAEA Safety Standards Series in an Interim Edition. This Interim Edition has been submitted to the other potential sponsoring organizations for approval. Following their approval it will be issued as a jointly sponsored standard, referred to as International Basic Safety Standards.

B. Sponsorship by the European Atomic Energy Community

The European Commission has been actively involved in the BSS Secretariat. The different drafts were discussed in meetings of the Group of Experts established under Article 31 of the Euratom Treaty and progress in drafting was presented, both by Agency staff and by the Commission secretariat. This strong interaction has ensured that to a large extent the International BSS are in agreement with the Euratom Basic Safety Standards. This interaction has also contributed to a parallel drafting of the Euratom BSS in a way consistent with the IBSS.

The Group of Experts has given an opinion on 24 February 2010 on draft text of the Euratom Basic Safety Standards. The draft text of the Directive, with minor amendments, has now been adopted by the European Commission. At the meeting of the Group of Experts on 3 – 4 June 2010 the secretariat has proposed a working document entitled "Comparison International and Euratom Basic Safety Standards." The Experts have discussed this document and made recommendations either to IAEA or to the Commission. The Commission has used these recommendations in the meeting of IAEA with co-sponsors on 25 June 2010 in Vienna. To a large extent these recommendations have been taken into account in the final draft.

While the working document gives a comprehensive though not exhaustive overview of the differences in approaches and specific requirements, and does not allow for later changes, the overall thrust of the comparison is that despite differences in wording and in structure, it can be argued that the international BSS and the Euratom BSS offer a similar general framework of protection and are by and large consistent.

While IBSS are setting standards for the whole world, European standards were always aiming at a higher level of ambition in radiation protection. In quite a number of areas the Euratom BSS are more detailed or more demanding than the IBSS, for instance with regard to building materials or the protection of aircrew, or with regard to non-cancer effects of ionizing radiation. Any EAEC sponsorship of the international standards cannot mean their adoption. Member states that will implement the Euratom Basic Safety Standards or transpose these in national laws, as is required for EU Member States, will also be in agreement with the international standards. By endorsing the IBSS,

the EAEC is demonstrating its support. For non-EU countries this should provide encouragement to look into the Euratom BSS as an example for national legislative developments.

C. Opinion of the Group of Experts

The Group of Experts holds the view that a sponsorship of the International Basic Safety Standards, as defined in section B, strongly encourages their implementation by IAEA Member States and their endorsement by other international organisations.

The sponsorship by the European Atomic Energy Community should be without prejudice to the inter-institutional decision making process on Euratom Basic Safety Standards, nor to possible amendments of the proposed Euratom BSS before their adoption by the Council.

The Group of Experts invites the Commission to transmit this opinion to the other sponsoring organisations and, in view of the unique responsibility of the EAEC in establishing binding European standards, to explore the possibility of reflecting this fact in the preamble of the IBSS.

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